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## Organizing Ideas: **Webbing, Mapping and More**

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### MATHEMATICS Grades 10 - 12

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When putting ideas together, people use different strategies to sort their information. An initial organization allows them to make connections, identify relationships, and determine possible directions and forms for their thinking and writing. This strategy gives students the opportunity to reorganize, regroup, sort, categorize, classify, and cluster their notes.

#### **Purpose**

- To identify relationships and make connections among ideas and information.

#### **Payoff**

Students will:

- use a variety of strategies to organize information that can be used throughout the course and identify connecting ideas.

#### **Tips and Resources**

Strategies for webbing and mapping include:

- *Clustering* – looking for similarities among ideas, information or things, and grouping them according to characteristics.
- *Comparing* – identifying similarities among ideas, information, or things.
- *Contrasting* – identifying differences among ideas, information, or things.
- *Generalizing* – describing the big picture by using the clusters and information presented.
- *Outlining* – providing a framework for what has been accomplished based on the information presented.
- *Relating* – showing how events, situations and ideas are connected.
- *Sorting* – arranging information into clusters.
- *Trend spotting* – identifying things that seem to follow a pattern.

Also see Student/Teacher Resource, *Webbing, Mapping and More*.

#### **Further Support**

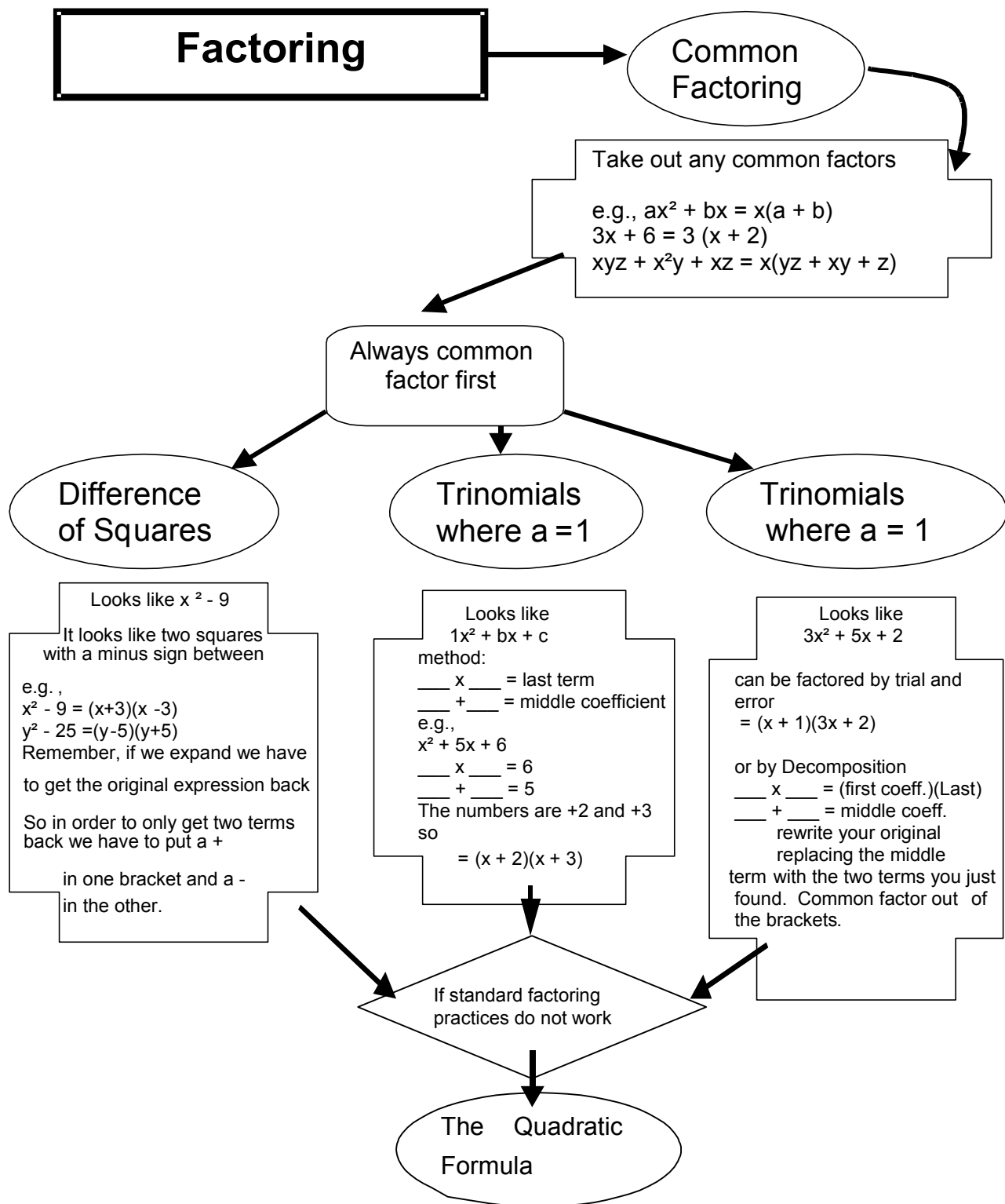
- Provide students with sample graphic organizers that guide them in sorting and organizing information and notes [e.g., cluster (webs), sequence (flowcharts), compare (Venn diagram)].
- Collect student samples of graphic organizers that they have successfully used earlier in their studies and create a class collection for student reference and use.
- Select a familiar topic (e.g., a topic for review). Have students form discussion groups. Taking turns, students record one idea or question on a post-it note and place it in the middle of the table. Encourage students to build on the ideas of others. After students have contributed everything they can recall about the topic, groups sort and organize their post-it notes into appropriate clusters on chart paper. Ask students to discuss connections and relationships, and identify possible category labels for the clusters. Provide groups with markers or highlighters to make links between the post-it notes. Display the charts.

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**Notes**

What teachers do	What students do
<b>Before</b> <ul style="list-style-type: none"> <li>• Select a unit or topic for review.</li> <li>• Have the students read from their class notes to identify major topics in the unit.</li> <li>• Show various examples of how connections are made among ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Bring notes from the topic under review to class.</li> <li>• Recall what they already know about the topic.</li> </ul>
<b>During</b> <ul style="list-style-type: none"> <li>• Ask the students for key ideas and list these on the board.</li> <li>• Ask students to identify possible groupings, relationships, and connections.</li> <li>• Ask students to organize the material using visual representation strategies.</li> </ul>	<ul style="list-style-type: none"> <li>• Contribute to key ideas.</li> <li>• Identify groupings and connections.</li> <li>• Organize the material using visual representation strategies.</li> </ul>
<b>After</b> <ul style="list-style-type: none"> <li>• Ask students to create a visual organizer for a different topic.</li> <li>• Discuss how students can use this organizer as a study tool.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a visual organizer.</li> <li>• Share and compare.</li> <li>• Use visual organizers for review.</li> </ul>

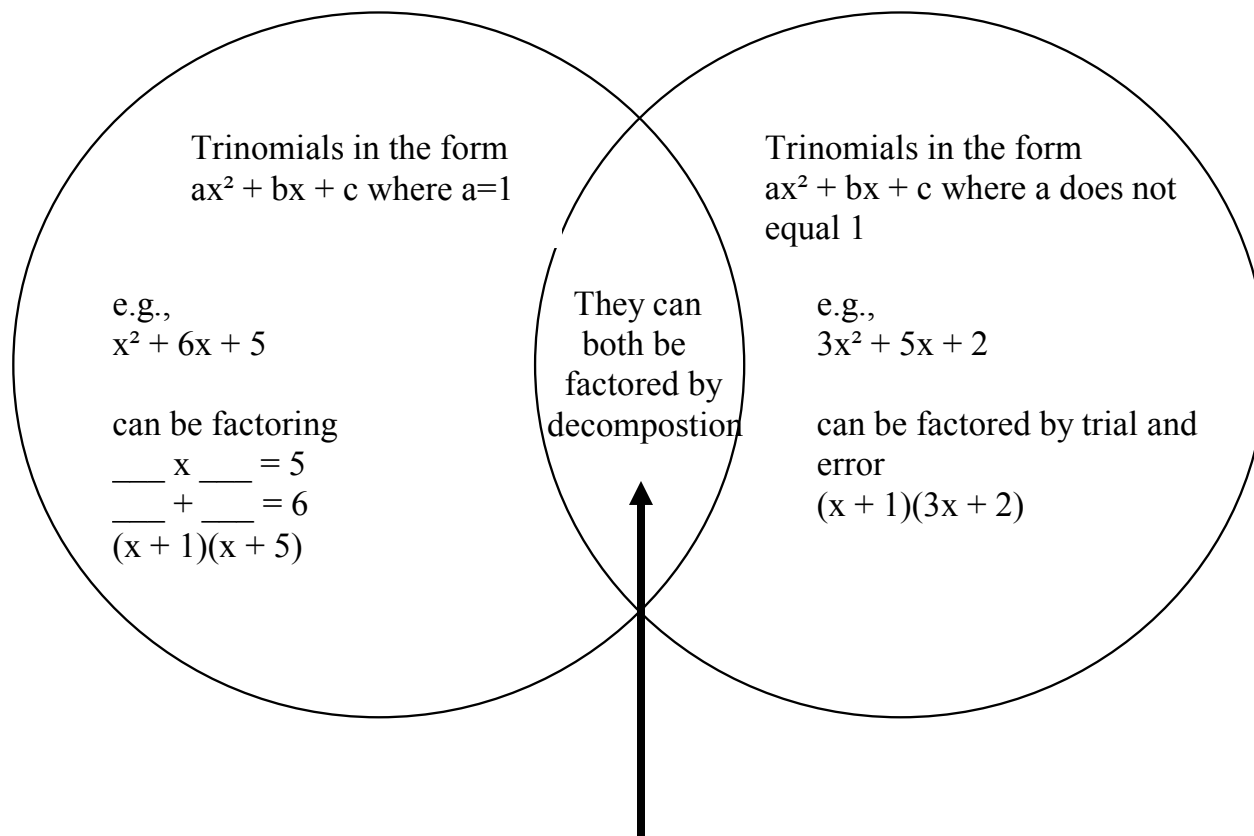




## Organizing Ideas: Webbing, Mapping and More

### MATHEMATICS Grade 12 (MCT 4C)

#### Comparing Using a Venn Diagram



$$x^2 + 6x + 5$$

$$\underline{\quad} x \underline{\quad} = \text{last term}$$

$$\underline{\quad} + \underline{\quad} = \text{middle term}$$

$$3x^2 + 5x + 2$$

$$\underline{\quad} x \underline{\quad} = (\text{first})(\text{last})$$

$$\underline{\quad} + \underline{\quad} = \text{middle term}$$

rewrite original using factors found in above

$$x^2 + 5x + 1x + 5$$

$$3x^2 + 2x + 3x + 2$$

put brackets around the two sets of parts

$$(x^2 + 5x) + (1x + 5)$$

$$(3x^2 + 2x) + (3x + 2)$$

common factor out of each set of brackets

$$x(x + 5) + 1(x + 5)$$

$$x(3x + 2) + 1(3x + 2)$$

common factor to the front

$$(x + 5)(x + 1)$$

$$(3x + 2)(x + 1)$$